

REMARKS

Independent claims 19 and 20 are presented in lieu of canceled allowable dependent claim 16 and 18.

Applicant's independent claim 1 has been extensively amended to clearly distinguish applicants device over Brown 5,004,226 which was applied against claim 1 in the final action. Brown '226 discloses a rectangular section rod integrally encompassed in a cylindrical sheath. When the Brown exercise device is used, it is intended that it bend about the major cross section axis of the rod and the rod is not free to reorient itself relative to its cylindrical encapsulation. A marker 20, shown in Figure 2 of Brown '226 shows the user the direction in which the device should be bent. There is no suggestion in Brown '226 that a rectangular section rod affording bending resistance be placed loosely in a thermoplastic tube as defined in amended claim 1.

Benach 6,872,174 (also applied against claim 1), at col 3, lines 4-8, describes a tubular component of epoxy resin matrix with continuous fiber reinforcements both longitudinally and circumferentially, which affords the bending resistance of the device. As stated in col 4, lines 4-5 of Benach the tubular stretching device provides the "resistance means" for an individual to exercise his or her upper torso and arm muscles. Knowledge of the Benach device would not lead one of ordinary skill in the art to consider using it for the function of the elongated flexible tube with a round section cavity which does not function as a resistance means but as a housing for a resistance rod. In applicants claimed construction the flexible thermoplastic tube with a round section cavity serves as a housing for the rectangular section resistance rod "fitting loosely within said round section cavity". There is nothing about Benach which suggests using a loose fitting rectangular section rod for bending resistance. Brown '226 modified by Benach's teachings produces a cylindrical rod of Benach embedded in a mass of plastic having a

cylindrical exterior. At most Benach suggests using a cylindrical tube of reinforced plastic as the resistance component of an exercise device. If the rectangular section resistance rod of Brown '226 were substituted for the cylindrical tube resistance "body" of Benach there would be hand grips at each end but no thermoplastic tube with a "round section cavity". The teachings of Brown '226 and Benach do not produce applicants claim 1 construction.

Claim 1 as amended defines an elongated flexible thermoplastic tube. As before stated Benach describes an epoxy resin matrix---with continuous fiber reinforcements, both longitudinally and circumferentially resulting in a tube of high tensile and compressive flexural strength. Applicants tube is distinguished by being defined as a "flexible thermoplastic". This provides a relatively soft feel to the body whereas Benach's tube does not. The tube 1 of Benach does not suggest the tube defined by applicants claim 1. The tubing specified by Benach is basically that of Glasforms FEATHERLITE™ tent poles as described in an accompanying advertising brochure of Glasforms, Inc. marked Attachment A. Also attached as Attachment B is web site printout of Glasforms, Inc. concerning Glasforms tubing referred to in col 3 lines 4-18 of the Benach patent.

It is clear that Benach does not suggest inserting anything into the cylindrical tube used by Benach as the resistance device.

The criticality of a round section cavity of applicants tube defined in the claims has been questioned. An important attribute of applicant's exercise device is that a person using the exercise device defined in the claims does not need to rotate the device about its longitudinal axis to orient the rectangular section resistance rod so that it will flex about its major axis. The rectangular section rod automatically adjusts to bend about its major cross section axis. When bowed in any direction, the lengthwise edges of the rod will engage the curved round interior

cavity surface and cause it to orient itself to bend about its major cross section axis. This function of the rod is explained in paragraph [0012] of applicant's specification. Additionally, the rectangular cross section shape of the rod is highly desirable because of its long service life. It is believed to be clear that Brown '226 shows a rectangular rod which is restrained from rotation relative to the veil 14 covering the filament matrix means 12. Certainly the 0.075 inch spacing between the sheath 19 and the filament matrix means 12 mentioned in Brown '226 does not suggest a rod filling loosely within a round section cavity of a tube because the rod is encapsulated around its entire perimeter (Fig. 2) by a material such as 80 durometer non-marking styrenebutadiene rubber (col 6, lines 40-44).

Dependent claims 2 through 16 are believed to be allowable for reasons advanced for allowance of parent claim 1.

The non kinking feature of canceled dependent claim 17 has been incorporated in amended claim 1. In rejecting former claim 17 reference is made to Figure 4 of Brown '226 showing the device bent in excess of 180° without any apparent kinking as is well known a solid cylindrical member is less likely to kink than a tubular member. In applicant's claimed device, the tube by not kinking maintains an interior curvature which is effective, when engaged by the lengthwise edges of the rectangular section rod, to orient the rod to bend about the major axis of its cross section.

Claims 11-14 were rejected under 35 USC 103 (a) as being unpatentable over Brown in view of Cho 4,690,401. Cho's spring steel layers are banded together and are not "fitting loosely in said tube" as defined by claims 11, 12, 13.

Amended claim 14 depending from claim 1, functionally describes the orientation of the rod by the interior surface of the round section cavity of the tube and is believed allowable for

reasons herein presented for allowance of parent claim 1.

A notice of allowance is solicited.

Respectfully submitted,



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